

# Understanding Student Use of Digital Learning Resources

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# Why Study Use of Digital Resources

- How people interact with scholarly content is changing
- Roots in NSDL and other digital library initiatives
- People had only studied how faculty used specific collections or how students did research papers
- No one knew how faculty or students found & used materials



# We Started Out Looking at Faculty Use of Digital Resources

- 2006 – 2009 – National survey of STEM instructors regarding their use of digital resources in teaching (n=4,439)
- 2009 – Large international survey of Physics instructors (n=9,275)
- 2011 – National study of Social Science faculty (n=1,037)

# Research Questions - Faculty

- What do faculty members do with the online digital resources they find at digital libraries, online collections, etc.?
- Do faculty value digital resources?
- How do faculty use digital resources for teaching purposes?
- What are the barriers to their use of resources and digital libraries/collections?

# How different are faculty from one another?

- When we look at traditionally identified faculty populations, we saw few differences.
  - The type of institution where they serve
  - The amount of time that they have been teaching
  - Even discipline was less a factor than expected
- As far as these traditional groups go, we have a homogenous population

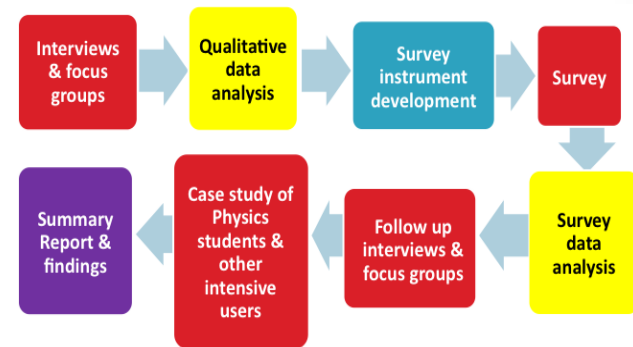
# Conclusions about Faculty

- Instructors are changing more slowly than the educational landscape
- Need activation to overcome barriers and encourage adoption
- Intrinsic motivation is a powerful force (but people do not have limitless reservoirs)
- Still, students are a powerful extrinsic motivator

How do students use digital resources in their learning?

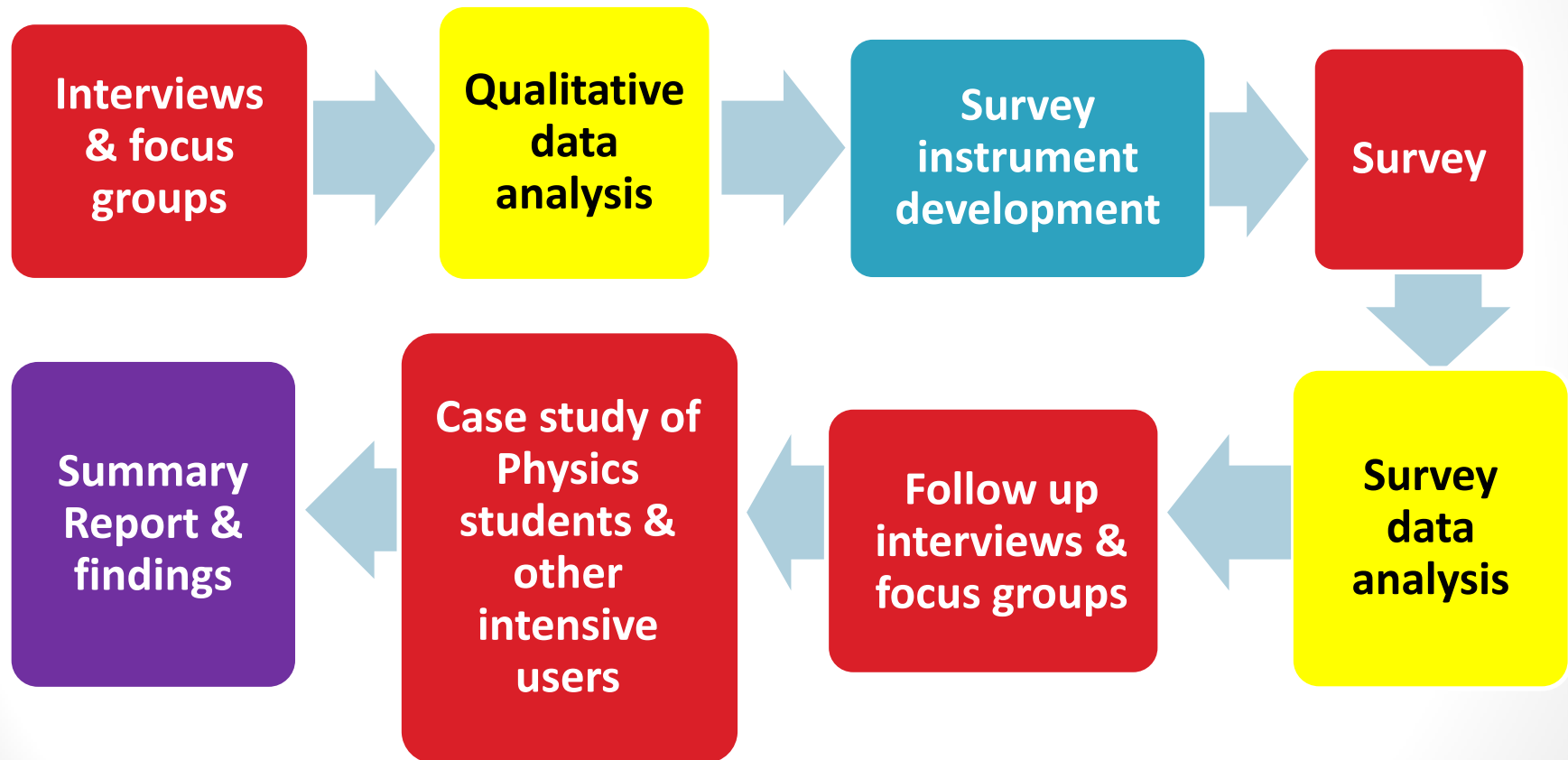
# Research Questions - Students

- What are the circumstances that motivate students to look for DRs?
- Where to students start searching?
- What criteria to students use to assess DRs?
- What barriers to students face in finding & using DRs?
- What kinds of DRs do students prefer?
- Do students value “collections”?





# Student Study – 2011 - 2013



# Qualitative Findings

# Student Use of Digital Resources

Students making far more independent use of digital resources than we had anticipated



Frequently they seek information/explanation when faculty or instructors do a poor job

# What Kind of Digital Resources?



Students do value content that is well organized – they use Google to find it but there does seem to be some value in “collectionness”

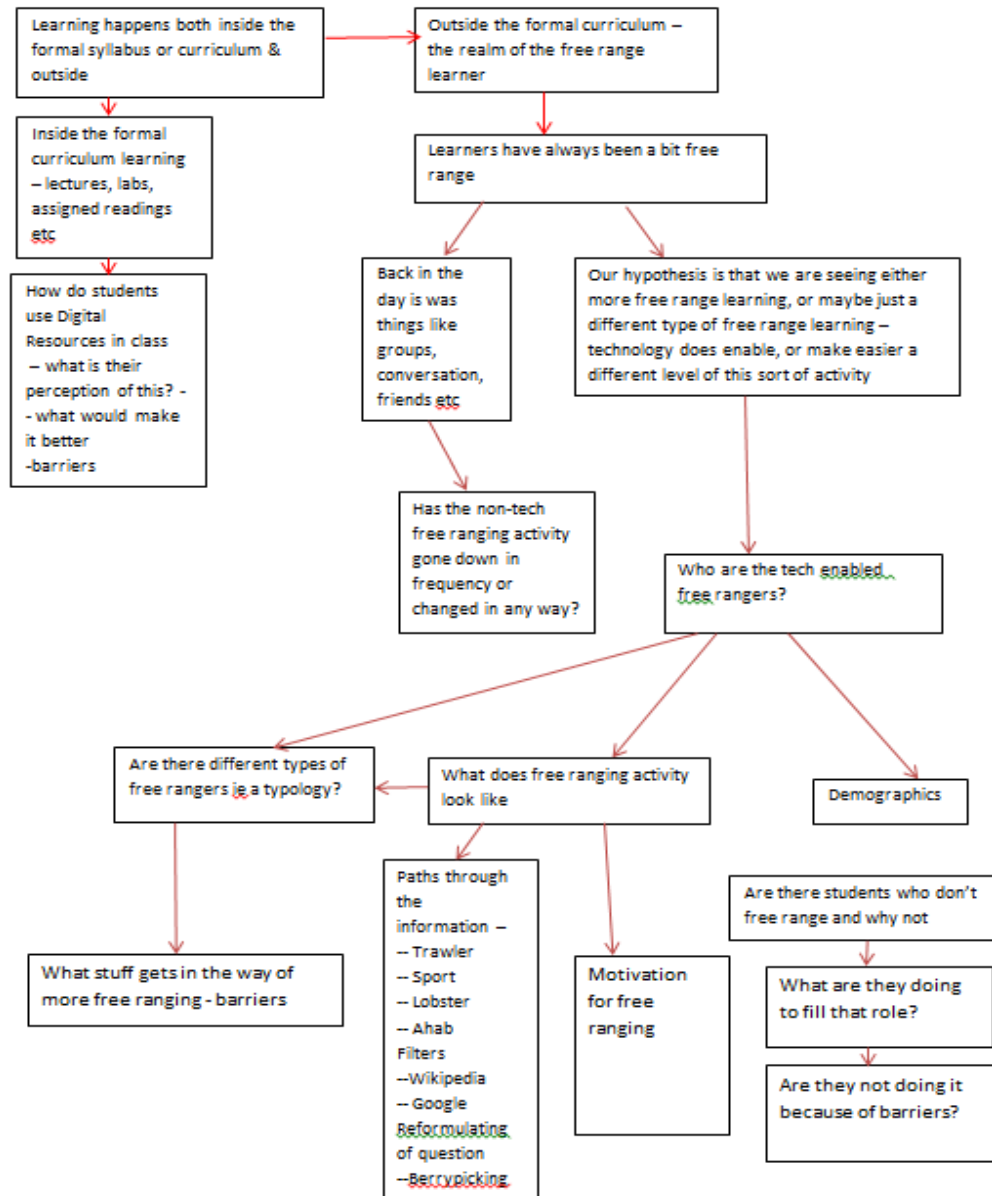
- They definitely seek out video but its not clear if they prefer it
- Question of chunked vs whole lectures
- Finding sources faster than we can identify them
- Role of Wikipedia

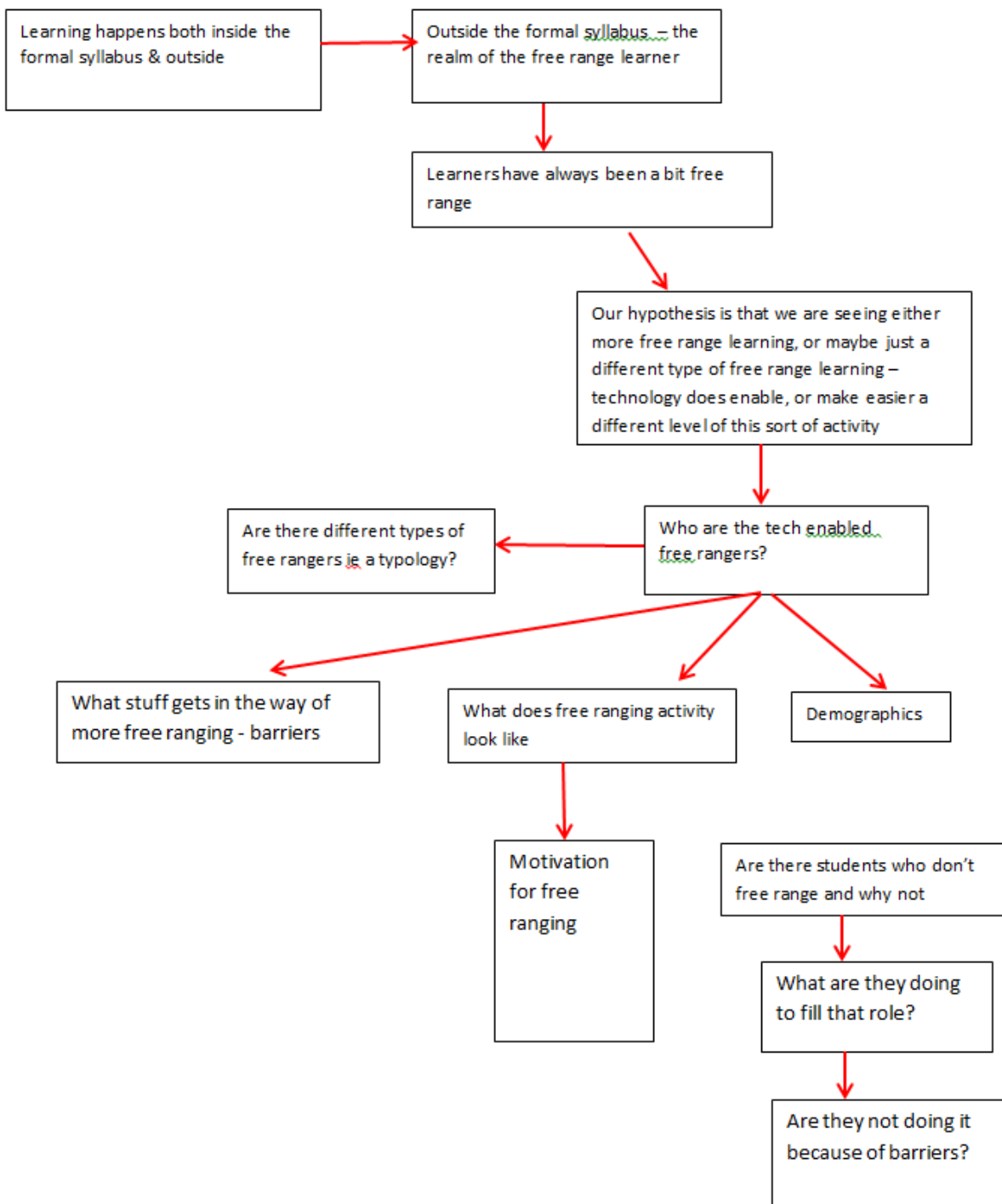
# Connections and Digital Resources

- Role of friends as part of the learning process
- Groups less important
- Much less of a role for conventional authoritative figures
- Importance of mobile access



# How and Why Students Use Digital Resources





## Formal Syllabus

- Learning happens both inside and outside
- Outside is the realm of the “free range learner”
- Learners have always been a bit “free range”

## Hypothesis

- That we are seeing more free range learning – or a different type of free range learning
- Who are the free rangers?
- Are there different types of free ranger?

## Free Rangers

- Demographics
- Motivation
- Barriers

## Non Free Rangers

- Are there students who don't free range, and why not?
- What are they doing to fill that role



# Survey Strategy

# Student Survey Lines of Inquiry

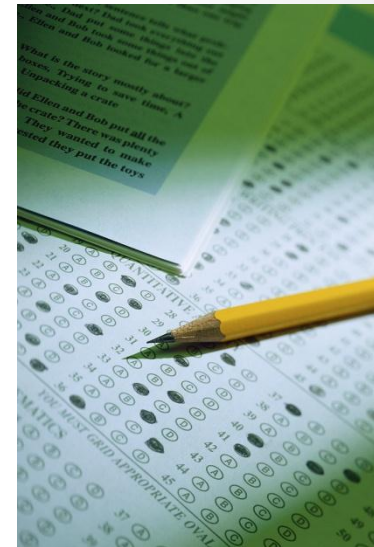
- Where do students turn when they run into problems with schoolwork
- Where do students turn when they are interested in a topic
- General motivations for studying and academic work
- Use of digital resources in class and students preferences

# Pilot Survey

- **Online survey**

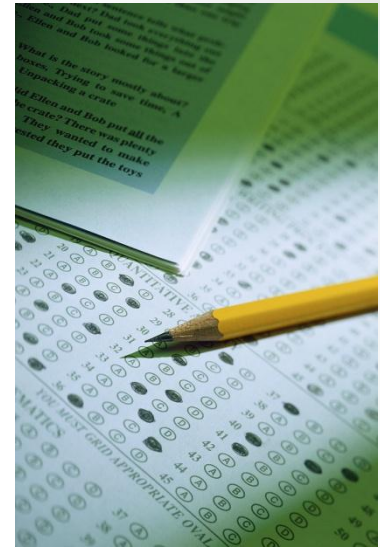
- **Conducting pilot**

- 2 faculty at UCF advertised to their classes
- ~50 responses
- Asked students for feedback regarding questions that were confusing



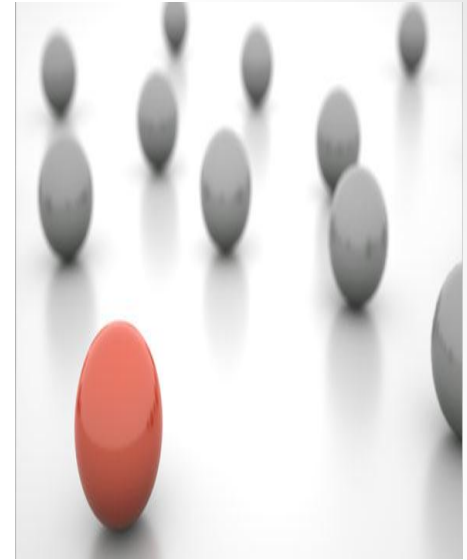
# Survey Strategy

- **Using survey sample company**
  - Maintain large database of people
  - Can pre-screen on demographics
  - National sample
  - Removes researcher pressure on participant



# Survey Comparisons

- **The nature of this sample is providing us with three comparison groups:**



- Full & Part-time Students\*\*
- Former Students
- Never Been / Not Currently Students

# **Implications for Blended Learning**

# Making Blends Out of Natural Ingredients

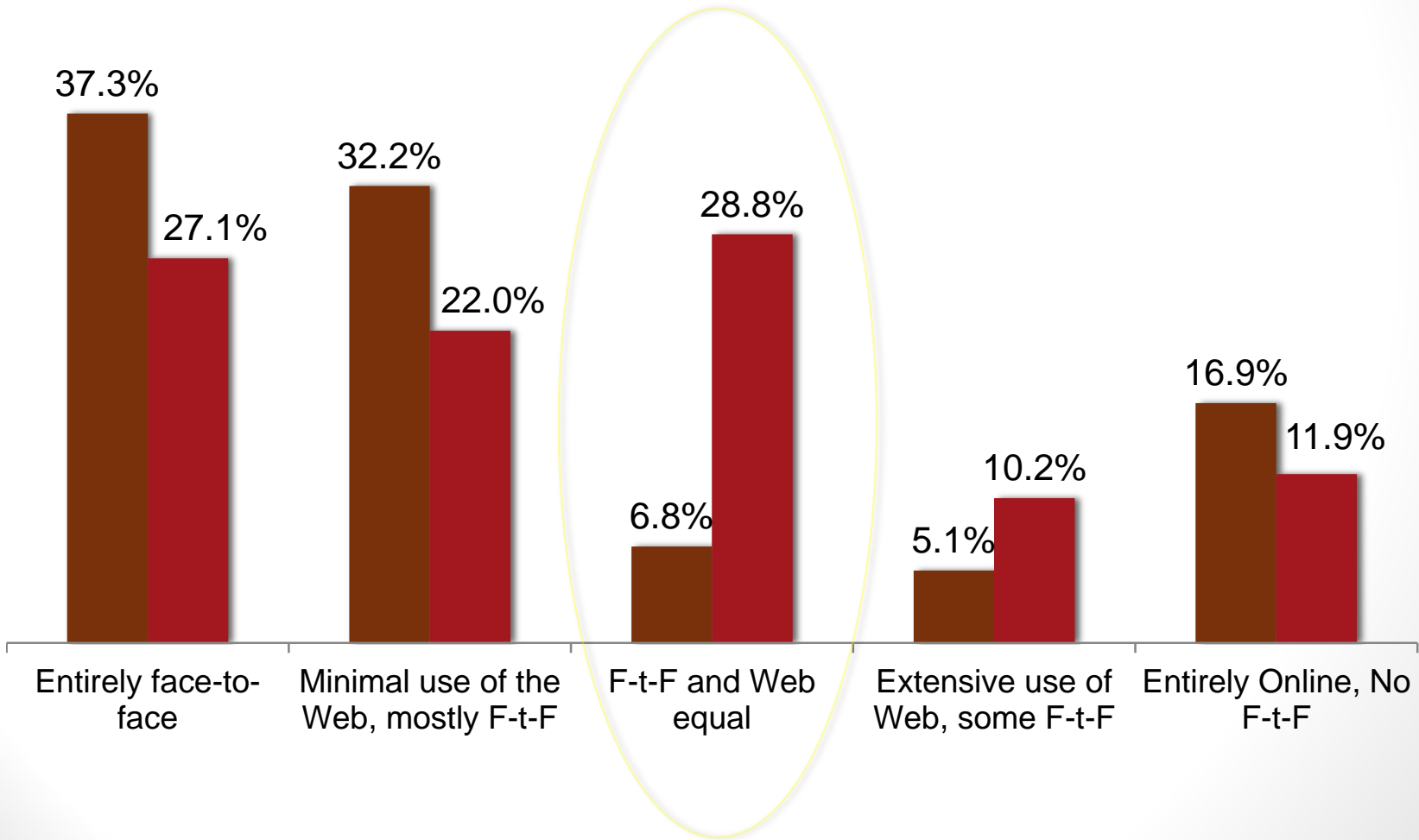
- Overall students are using a lot of digital resources – but largely on their own
- Can we draw on that?
- Indicating more interest in blended options and technologies that lend themselves to blended learning



# How are most of your courses currently taught? How would you PREFER they be taught?

## Current Instruction

## Preferred Instruction





# How often would you PREFER the following technologies were used in class by faculty?

Never Seldom Sometimes Frequently

Social networking technologies, e.g. Twitter, Facebook, Ning



Content from websites outside of your campus



Mobile apps related to course content



Simulations, animations, or online games related to course content



E-books or e-textbooks



Course wikis and blogs



Video or audio related to course content



# Survey Follow Ups

- **Our Motto is:**  
“Explore BIG – Focused Refinement”
- **Possible Follow Ups:**
  - Physics Students
  - UW-Madison / IL Students
  - Others?



# Questions

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